

The Classes in St. Mungo's College qualify for the English, Scotch, and Irish Conjoint Boards and, under certain conditions, for the various Universities.

Students who have fulfilled the conditions of the Carnegie Trust as regards Scottish birth or extraction, age (sixteen years), and Preliminary Examination, are eligible for the benefits of this Trust during the whole course of their studies at St. Mungo's College.

ST. MUNGO'S COLLEGE

THE MEDICAL SCHOOL OF THE GLASGOW
ROYAL INFIRMARY

Syllabus of Medical Curriculum

SESSION 1910-1911

CLASS ROOMS

St. Mungo's College Buildings

86 CASTLE STREET



SECRETARY'S OFFICE, 97 WEST REGENT STREET

J. T. T. BROWN, ESQ., *Secretary*

FACULTY OF MEDICINE.

DEAN OF FACULTY, - - -	PROFESSOR MONRO.
SECRETARY OF FACULTY, - -	PROFESSOR BATTERSBY.

THE WINTER SESSION opens on Monday, 17th October, 1910, and ends on Thursday, 23rd March, 1911.

THE CHRISTMAS VACATION begins on Monday, 26th December, 1910, and ends on Monday, 9th January, 1911.

THE SUMMER SESSION begins on Tuesday, 25th April, and ends on Tuesday, 4th July, 1911.

All requests for official information concerning Fees, Classes, Hospital Attendance, etc., should be addressed to the Secretary of the Medical Faculty, at St. Mungo's College, 86 Castle Street, Glasgow. The Secretary may be consulted at the College daily at 11 a.m. on and after 14th October, 1910.

GENERAL REGULATIONS.

Students may enrol on any weekday (except Thursday), from 10th to 31st October, between the hours of 9 a.m. and 12 noon. Tickets for the Classes are to be obtained from Dr. THOM, Superintendent of the Royal Infirmary. Students should bring the exact amount of their fees.

Every Student on entering is required to sign his or her name in the Register of Students attending the Medical Classes in the College.

* * * The Classes in St. Mungo's College are open both to male and to female students.

Elementary Physics, 11.15 a.m. (at the Technical College),	}	PROF. MUIR.
Chemistry, 9 a.m.,		MR. AGNEW.
Zoology, 1.30 p.m.,	}	PROF. KING.
Practical Zoology, 2.30-4.30 p.m.,		
Senior Anatomy, 11 a.m.,	}	PROF. BATTERSBY.
Junior Anatomy, 9 a.m.,		
Practical Anatomy, 9 a.m. to 5 p.m.,		
Surgery, 12 noon,		
Physiology, 12 noon,		PROF. DUFF.
Clinical Surgery, 9 a.m.,		Surgeons of the Royal Infirmary.
Practice of Medicine, 12 noon,		PROF. T. K. MONRO.
Clinical Medicine, 9 a.m.,	}	Physicians of the Royal Infirmary.
Materia Medica, 1 p.m.,		
Pathology, 3 p.m.,		DR. JOHN P. DUNCAN.
Ophthalmology, 4 p.m., Mondays and Thursdays,		PROF. TEACHER.
Gynæcology, 11 a.m., Tuesdays and Thursdays,		PROF. MAITLAND RAMSAY.
Throat and Nose, 12 noon, Tuesdays and Fridays,		DR. G. B. MARSHALL.
Public Health Laboratory, 10 to 6,	}	DR. DAVID McKAIL.
Public Health, to be arranged,		
Bacteriology, if desired.		
Hospital Dispensary, daily, 2 p.m.		

Practical Pathology, 1-3 p.m.,	- - - -	PROF. TEACHER.
Botany, 9 a.m.,	- - - -	} PROF. JAMES SWANSON.
Practical Botany, 8 a.m.,	- - - -	
Practical Chemistry,	- - - -	MR. AGNEW.
Practical Physiology, 12 noon,	- - - -	PROF. DUFF.
Clinical Surgery, 9 a.m.,	- - - -	Surgeons of the Royal Infirmary
Operative Surgery, 11 a.m.,	- - - -	PROF. PATERSON.
Surgical Diseases of Children,	11.30 a.m.,	} DR. JAMES A. ADAMS.
Tuesdays and Thursdays,	- - - -	
Clinical Medicine, 9 a.m.,	- - - -	} Physicians of the Royal Infirmary.
Anatomy, Advanced Demonstrations, 3 p.m.,	- - - -	
Demonstrations, 11 a.m.,	- - - -	} PROF. BATTERSBY.
Practical Anatomy. 8 a.m. to 5 p.m.,	- - - -	
Osteology, as may be arranged,	- - - -	
Forensic Medicine and Hygiene, 12 noon,	- - - -	DR. DAVID M'KAIL.
Midwifery, 11 a.m.,	- - - -	PROF. ROBERT JARDINE.
Dermatology, 12 noon, Tuesdays and Thursdays,	- - - -	DR. ALEXANDER MORTON.
Otology, 3 p.m., Tuesdays and Fridays,	- - - -	DR. J. KERR LOVE.
Bacteriology, daily, hour to be arranged,	- - - -	DR. DAVID M'CRORIE.
Psychological Medicine, 2 p.m., Thursdays,	- - - -	} DR. HAMILTON C. MARR.
Clinique at Woodilee Asylum as arranged,	- - - -	

Hospital Dispensary, daily, 2 p.m.

THE COLLEGE BUILDINGS.

The buildings occupied by the Medical Faculty of St. Mungo's College were erected in the year 1882 for the Glasgow Royal Infirmary School of Medicine, and, on the incorporation of St. Mungo's College, were handed over to the Governors by the Managers of the Royal Infirmary. They are situated close to the Infirmary in Castle Street, and are provided with class-room and laboratory accommodation for three or four hundred Students.

The ANATOMICAL DEPARTMENT, which is especially complete, consists of a Lecture Room, a Dissecting Room, an Osteology Gallery, a Museum, etc. The Dissecting Room is lofty and spacious, well lighted towards the north, and measures 67 feet in length by 25 feet in breadth.

The CHEMICAL and PHYSIOLOGICAL LABORATORIES are large and fully equipped, the latter provided with valuable instruments, of which a number were presented by Dr. Muirhead, formerly one of the Managers of the Royal Infirmary; while for these and other classes there are Lecture Rooms equally well fitted up.

Suitable PUBLIC HEALTH, ZOOLOGICAL, and BOTANICAL LABORATORIES have also been provided, with the requisite apparatus and appliances.

PRIVATE ROOMS are provided for the teachers, and for the use of Students there is a large room with lavatory attached. Altogether, no effort has been spared to render the accommodation worthy of the College and Hospital, and to afford facilities for obtaining a thorough and complete medical education.

The College is equipped with a complete electric light installation and a powerful electric educational lantern.

Adjoining the College are the Dispensaries for giving advice to out-patients. Last year there were 147,000 attendances by patients, and over 40,000 patients received advice and treatment.

In connection with the Hospital there are a large PATHOLOGICAL MUSEUM, a PATHOLOGICAL LABORATORY, and a BACTERIOLOGICAL LABORATORY, to all of which Students have access.

CLINICAL AND OTHER HOSPITAL CLASSES.

Glasgow Royal Infirmary.

This Hospital, which immediately adjoins the College Buildings, contains 590 beds available for clinical instruction and study. Of these, 364 are for Surgical and 226 for Medical Cases. There is a special ward for the treatment of Diseases of Women. The number

of in-patients under treatment last year was 8102, while over 40,000 were attended to and prescribed for at the Dispensary.

The hour for out-patients is 2 p.m.

The hour of visit is 9 a.m. All Physicians and Surgeons of the House give clinical instruction and lectures. (See also pages 3 and 35.)

Operations.—The Surgical Operations, except in cases of emergency, are performed in the Operating Theatres, at the visit hour, 9 a.m. During last year 4477 cases were submitted to operation.

Post-Mortem Examinations are made between 9 and 11 a.m.

The Pathological Museum, which is a very valuable one, is open to Students of the College.

Vaccinator.—The Vaccinator attends at the Dispensary every Monday and Thursday at 12 noon to give instruction. The certificates are recognised by the Privy Council as qualifying for Government, Parochial, and other appointments. Six weekly attendances. Fee, £1 1s.

Practical Pharmacy.—(See page 20.)

Physicians.

Dr. G. S. MIDDLETON.
Prof. T. K. MONRO.

Dr. WALTER K. HUNTER.
Dr. JOHN M. COWAN.

Dr. M'KENZIE ANDERSON.

Surgeons.

Dr. JOHN BARLOW.
Dr. J. A. ADAMS.
Dr. DAVID NEWMAN.

Dr. Q. M'LENNAN.
Mr. J. HOGARTH PRINGLE.
Dr. H. RUTHERFURD.

Dr. PETER PATERSON.

Surgeon for Diseases of Women—Dr. BALFOUR MARSHALL.

Surgeon for Diseases of Throat and Nose—Dr. JOHN MACINTYRE.

Consulting Surgeon for Diseases of the Eye—Prof. A. M. RAMSAY.

Assistant Physicians.

Dr. DAVID M'CRORIE.
Dr. JOHN HENDERSON.
Dr. CAMPBELL S. MARSHALL.

Dr. JAMES SCOTT.
Dr. JOHN T. MACLACHLAN.
Dr. A. W. HARRINGTON.

Assistant Surgeons.

Dr. A. N. M'GREGOR.
Mr. JOHN PATRICK.
Dr. A. G. FAULDS.

Dr. JOHN A. C. MACEWEN.
Dr. THOMAS KAY.
Mr. ROBERT RAMSEY.

Extra Assistant Physicians—Dr. DUGALD MACPHAIL, Dr. WILLIAM H. BROWN, and Dr. ERNEST A. BOXER.

Extra Assistant Surgeons—Mr. JAMES BATTERSBY, Mr. DONALD DUFF, and Dr. MILNE M'INTYRE.

Pathologist and Curator of Museum—Dr. JOHN H. TEACHER.

Assistant Pathologist—Dr. ALEX. M. KENNEDY.

Extra Assistant Pathologist—Dr. STEWART.

Bacteriologist—Dr. DAVID M'CRORIE.

Assistant Bacteriologists—Dr. J. A. CAMPBELL and Dr. LIZZIE T. FRASER.

Aural Surgeon—Dr. J. KERR LOVE.

Assistant Aural Surgeons—Dr. JAMES ADAM and Dr. R. S. M'KIM.

Dental Surgeon—Mr. WILLIAM TAYLOR, L.D.S.

Surgeon for Diseases of Throat and Nose—Dr. R. FULLERTON.

Physician for Diseases of Skin—Dr. ALEXANDER MORTON.

Ophthalmic Surgeons—Dr. JOHN ROWAN and Dr. H. W. THOMSON.

Gynæcologists—Dr. PETER M'BRYDE and Dr. WM. D. MACFARLANE.

Extra Dispensary Gynæcologists—Dr. A. G. BANKS and Dr. E. GRAHAM TAYLOR.

Vaccinator—Dr. H. H. BORLAND.

Anæsthetists—Dr. DONALD, Dr. BRUCE, and Dr. FAIRLIE.

Consulting Electrician—Dr. JOHN MACINTYRE.

Electrician—Dr. JAMES R. RIDDELL.

Assistant Electricians—Dr. SAMUEL CAPIE and Dr. KATHARINE M. CHAPMAN.

Dr. J. MAXTONE THOM, *Superintendent*.

DISPENSARY DEPARTMENT.

Ear.—Dr. J. Kerr Love and Dr. James Adam attend on Tuesdays and Fridays at 3.30 p.m.

Teeth.—Mr. William Taylor, L.D.S., attends on Mondays, Wednesdays, and Saturdays at 3.30 p.m.

Throat and Nose.—Dr. Fullerton attends on Tuesdays and Fridays at 11 a.m.

Dr. Macintyre visits the Throat and Nose Wards daily at 3 p.m.

Skin.—Dr. Alexander Morton attends on Mondays, Wednesdays, and Fridays at 10 a.m.

Eye.—Dr. H. Wright Thomson attends on Mondays and Wednesday and Dr. Rowan on Fridays, at 11 a.m.

Women.—Dr. Macfarlane attends daily at 11.30 a.m.

Students of the College are admitted to see the special treatment these departments free.

The Glasgow Ophthalmic Institution.

The Glasgow Ophthalmic Institution, situated at the corner West Regent Street and Wellington Street, contains 34 beds and Dispensary Department. The number of new patients admitted the benefits of the institution last year was 11,522. Of these, 10,417 were treated as outdoor patients, and 1087 were admitted to the wards for operation and special treatment. The number of operations was 648, and in addition to these, numerous minor operations were performed in the out-patient department.

A course of lectures and clinical instruction for medical students given during the winter session.

District Asylum of the Glasgow Lunacy Board, Woodilee, Lenzie.

The Asylum has 1,044 beds, and admits annually over 300 new cases of insanity. Embraced in the Asylum are Hospitals (200 beds), Sanatorium for consumptive insane, a Home for idiot children, and Pathological Laboratory. Adequate instruction is afforded in all phases of the insanities of mind. There are annually eight clinical clerkships vacant; these are open to senior medical students (*see next page*).

Ruchill and Belvidere Fever Hospitals.

Under the authority of the Corporation of the City of Glasgow courses of Clinical Instruction in Infectious Diseases are given during the winter and summer sessions by Drs. Johnston and Brownlee, Physician-Superintendents at Belvidere and Ruchill respectively.

Each class is advertised prior to its commencement.

Maternity and Lock Hospitals.

These Hospitals, near the Royal Infirmary, can also be attended by Students.

HOSPITAL APPOINTMENTS.

Glasgow Royal Infirmary.

FIVE HOUSE PHYSICIANS and TEN HOUSE SURGEONS, who must be registered Medical Practitioners, are lodged and boarded in the House free of charge. The period of service in each of the Medical and Surgical Departments is six months.

DRESSERS and CLINICAL CLERKS are selected from the Students and appointed without any additional fee. From the large number of cases of accident and acute disease, these appointments are of great value to Students.

Woodilee Asylum, Lenzie.

Connected with this Asylum there are annually eight Clinical Clerkships vacant, which are open to senior medical students. These clinical clerks have board and lodging and a season ticket between Lenzie and Glasgow to allow of attendance on classes in Glasgow. The work of the medical clerks dovetails into the work of the final examinations in medicine, and is of great practical advantage to students in medicine. The teaching of insanity consists of lectures in Glasgow and clinical demonstrations and exhibitions of microscopical and macroscopical specimens illustrative of morbid conditions of the insane brain, at the Asylum.

PRIZES, BURSARIES, Etc.

CARNEGIE TRUST.

Students who have fulfilled the conditions of the Carnegie Trust as regards Scottish birth or extraction, age (sixteen years), and Preliminary Examination, are eligible for the benefits of this Trust during the whole course of their studies at St. Mungo's College.

PRIZES.

Medals, Prizes, and Honorary Certificates are awarded at the close of each Session to those students who excel in Oral and Written Class Examinations. There is also a **Prize of Books to the value of £5** awarded each Winter Session by the President to the most distinguished student in the Class selected annually by him.

BURSARIES.

I. The "DAVID FOULIS" MEMORIAL SCHOLARSHIP.--In 1882 a fund was raised by subscription for the foundation of a scholarship in memory of DAVID FOULIS, M.D., Pathologist to the Royal Infirmary,

Glasgow, who died on 31st October, 1881. The funds yield a free income of about £25 per annum, and the scholarship is awarded for two years. It is open to all Medical Graduates and holders of Medical Licences in the United Kingdom, whose professional training has, to the extent of not less than two years, been received at the University of Glasgow, or at one of the extra-mural schools of that city. The appointment is in the hands of the Trustees in whom the fund is vested, who, in making the appointment, give a preference to such graduates and licentiates as have manifested a capacity for original work in the department of pathology, the object being to assist the holder of the scholarship in the prosecution of such work in Medical Schools to be approved of by the Trustees.

The next election will take place in October, 1910. Applications should be lodged with Messrs. J. M. TAYLOR, NELSON, WALKER & Co., 180 St. Vincent Street, Glasgow, on or before 15th September. Candidates should state the probable character and duration, and the proposed place of work.

II. The "JOHN REID" PRIZE.—A prize of the value of £25 was founded in 1882 by Miss Mary Reid, Renfrew Street, Glasgow, in memory of her brother, the late Mr. JOHN REID, Surgeon, 150 Renfrew Street there. The prize will be awarded for the best original research conducted in one of the hospitals or scientific laboratories in Glasgow bearing on any department of Medical Science. The competition is open to registered Students of Medicine of not less than two years' standing; and to qualified Medical Men of not more than two years' standing, who (1) are still attached as *bona fide* Students to one of the Glasgow Medical Schools, (2) are not engaged in practice, and (3) undertake to give up the prize if they enter on practice while holding it. All candidates are required to produce evidence of having attended a regular course of instruction in one of the recognised Medical Schools of Glasgow, on four of the following subjects:—Medicine, Clinical Medicine, Surgery, Clinical Surgery, Materia Medica, Physiology, Pathology;—such course of instruction having been received, in whole or in part, within three years of competing for the prize. The prize may be awarded for one, two, or three years, according to the value of the work done, or it may be withheld if the work of none of the competitors be of sufficient merit to warrant the granting of the prize.

Further information may be obtained from any of the Medical Trustees, viz.:—Prof. SAMSON GEMMELL; Prof. D. NOËL PATON; Dr. D. N. KNOX; Dr. JOHN GAREY, and Dr. JOHN H. TEACHER; or from the Registrar, Glasgow University; ALEX. DUNCAN, Esq., B.A., LL.D., Secretary of the Royal Faculty of Physicians and Surgeons, Glasgow; or Mr. JOHN HURLL, Writer, 142 St. Vincent Street, Glasgow. Competitive papers must be sent to Mr. Hurll on or before 31st Oct., 1910.

III. The "GLASGOW HIGHLAND SOCIETY" BURSARIES.—The Bursaries offered by the Society are of the yearly value of £25 for Medical education in Glasgow University, or any other College in Glasgow approved by the Managers, with the view of qualifying for a degree, and are open to Students entering University or College for the first time, or who have attended one summer session only. They are payable for five years, second and subsequent years' payments being dependent on the character of certificates obtained for classes in previous year's study. Applicants must pass the Preliminary examination at the University of Glasgow, and the Managers reserve to themselves the right to appoint the most suitable candidate. Applicants must be of Highland descent, and their circumstances such as require assistance.

The bursaries to be offered by the Society will be advertised. Applications should be made to Mr. HUGH BROWN, C.A., Secretary, 3 St. Vincent Street, who will furnish Forms of Application.

Courses of Medical Instruction.

THE Faculty of Medicine embraces the Classes of Practice of Medicine, Anatomy, Surgery, Midwifery, Chemistry, Materia Medica, Physiology, Forensic Medicine, Clinical Surgery, Clinical Medicine, Physics, Natural History, Botany, Ophthalmology, Fevers, Psychological Medicine, and Pathology, attendance on which is required for a Medical and Surgical Diploma in Scotland. In this Faculty are also included the Classes of Operative Surgery, Gynæcology, Dermatology, Otolaryngology, Diseases of the Throat and Nose, Hygiene, Surgical Diseases of Children, and Bacteriology.

THE "BELLAHOUSTON" CHAIR OF ANATOMY.

Professor—JAMES BATTERSBY, F.R.C.S. (Eng.), F.R.F.P.S.G.

Demonstrators—{ WILLIAM LAIRD.
 { J. WISHART KERR, M.B., Ch.B.

JUNIOR ANATOMY CLASS.

A Course of Lectures and Demonstrations will be given to Junior Students during the Winter Session, in which the Bones and Joints of the body will be fully described. After the Christmas Vacation the anatomy of the Arm and Leg will be considered, with the aid of recent dissections.

SENIOR ANATOMY CLASS.

Lectures on Advanced Descriptive Anatomy, with Demonstrations, will be delivered daily to Senior Students, throughout the Winter Session, and will be illustrated as far as possible by recent Dissections.

Class Examinations, both written and oral, will be held from time to time on the subjects included in these Courses.

The Roll is called daily, and Students must attend at least three-fourths of the Lectures, in order to have their tickets signed.

PRACTICAL ANATOMY.

The Rooms for Practical Anatomy are open from 9 a.m. till 5 p.m. in Winter, and from 8 a.m. till 5 p.m. in Summer. The facilities for Anatomical study are not surpassed by any other Medical School.

Mounted specimens are arranged in cases round the Dissecting Room, and are intended for the assistance of the Student in his own dissection. It is not, however, expected that they will in any measure supply the place of dissections made by his own hand.

The Anatomical Museum contains Osteological specimens, casts, models and wet preparations, the property of the College, and also the valuable collection of the late Dr. William Mackenzie, presented to the College by his son, W. J. Mackenzie, Esq.

The study of Osteology is facilitated by a complete series of articulated and disarticulated bones, mounted in cases in the Osteology Gallery.

Fees—For Lectures and Practical Anatomy, £4 4s.
For Practical Anatomy alone, - - 2 2s.

SUMMER SESSION.

The Anatomy rooms, Museum, and Osteology Gallery will be open daily during the Summer Session, from 8 a.m. till 5 p.m.

A Tutorial Class in Osteology for Junior Students will be held on three days a week.

Demonstrations, illustrated by recent dissections, preparations, models, and diagrams will be given in the Dissecting Room on four days a week.

Fees—For Practical Anatomy, including Demonstrations, £2 2s.
For Demonstrations and Osteology only, - - 1 1s.

CLASS IN SURGICAL ANATOMY.

Demonstrations on the application of Anatomy to Medicine and Surgery and on the Surface-markings of the Body will be given during the Summer Session. This course is intended to help those preparing for Final Examinations.

VACATION WORK.

Should a sufficient number of Students desire it, special facilities for Practical Anatomy may be arranged during the Easter and Summer Vacations.

NATURAL HISTORY (Zoology and Comparative Anatomy).

Professor—LEONARD A. LUCAS KING, M.A. (Cantab.).

1. CLASS LECTURES.—Class Lectures will be given at 1.30 p.m. on the chief characters and the general classification of the more important groups of animals, with special reference to the biological principles illustrated.

A study will be made of the types required for the Examinations of the English and Scottish Boards.

Attention will be given to the structure and life-history of parasites and other animals of particular medical interest.

2. LABORATORY WORK.—A Class will meet at 2.30 p.m. in the Zoological Laboratory for the study, by microscopic and other methods, of animals dealt with in the lectures.

TEXT BOOKS: "Zoology," Shipley and MacBride; "Elementary Practical Zoology," Parker and Parker; "Practical Zoology," Marshall and Hurst. A special Laboratory Note Book can be obtained at the College.

The Lectures and Practical Course, though primarily for Medical Students of the College, and recognised by the University of Glasgow as qualifying for graduation in Medicine, are also recognised by the University of Glasgow as qualifying for the B.Sc. Degree.

CHEMISTRY.

Lecturer—J. WATSON AGNEW, A.I.C., A.G.T.C.

This Class meets from 9 to 10 a.m. during the Winter Session.

The discussion of Chemical Philosophy and of the general methods and processes of Chemistry will arise out of a study of

the best known elements and their more important compounds. Problems of Physical Chemistry and other problems involving arithmetical calculation will be fully dealt with. The rationale of several manufacturing processes and of some of the applications of Chemistry in daily life will be touched upon, to the partial exclusion of historical matters. Sufficient time will be allowed during the latter part of the Course for an adequate treatment of Elementary Organic Chemistry.

The Lectures are illustrated by many class experiments, and by diagrams and specimens. Exercises and practice papers will be set from time to time, and the answers to these will be discussed tutorially.

Four Class Examinations will be held during the Session.

Class Fee, £2 2s.

PRACTICAL CHEMISTRY.

This Class meets once a week, on an afternoon to be arranged.

The work will include:—Examination of familiar Chemical Substances, with Instructive Experiments; the making of a few simple Chemical Preparations; a study of the reactions of certain Salts, with their application to analysis; small scale experiments in illustration of important processes; simple volumetric analysis. This work will be varied by informal Oral Examinations.

In the course of the Session two Practical Examinations and one Written Examination will be held.

Class Fee, £2 2s.

BOTANY.

Professor—JAMES SWANSON, M.A., M.B., C.M., F.R.F.P.S.G.

Assistant—CHARLES O'NEILL, M.B., C.M.

This Class is conducted during the Summer Session at 9 a.m.

This Course is recognised by the Universities, and by the Scottish Conjoint Board, as fulfilling their requirements with regard to Botany. Microscopic and Macroscopic Demonstrations will be given, and a Tutorial Class will be formed, so that Students may obtain a sound practical knowledge of the subject.

Introduction.

Biology.

What a Plant is.

General development of Plants.

Classification of Plants.

HISTOLOGY.

The cell.

Protoplasm :

Physical, chemical, and vital properties of protoplasm.

Development of the cell wall.

Contents of the cell—

(a) Cell Sap ;

(b) Chlorophyll ;

(c) Starch ;

(d) Aleurone grains ;

(e) Inulin ;

(f) Crystals.

Description of Primary meristem.

Development of the various systems of tissue—

1. Epidermal.

2. Fundamental.

3. Fibro-vascular.

The leaf, its structure and function.

Trichomes, emergence stipule, etc.

I. EXTERNAL MORPHOLOGY OF ANGIOSPERMS.

1. THE VEGETATIVE SHOOT—

(a) Stem ;

Different forms of stem and their function.

(b) The leaves, their development and arrangement on the axis.

(c) The root ;

Development of lateral roots.

2. REPRODUCTION—

(a) Asexual ;

Various forms of buds.

(b) Sexual ;

The flower, its morphology and relation to the vegetative shoot.

Fertilisation.

Various methods of cross pollination.

Special adaptations of the flower for cross pollination.

Anemophilous and entomophilous flowers.

A special description of the principal natural orders will be given.

III. PHYSIOLOGY OF PLANTS.

The food of plants.
 Organ by which the food is absorbed.
 Parasitism, its various degrees.
 Constructive metabolism.
 Destructive metabolism.
 Movements of water and gases through the plant.
 Transpiration and respiration.
 Growth. Tension in growing parts.
 Action of temperature and light on plants.
 Geotropism.
 Heliotropism.

IV. TAXONOMY.

1. MYXOMYCETES—Cethalium.
2. ALGÆ.
 Fucus. Polysiphonia, vaucheria.
 Spirogyra.
3. FUNGI.
 Mucor, eurotium, claviceps.
 Agaricus.
 Yeast, bacterium, penicillium.
4. HEPATICÆ.
 Marchantia.
5. MUSCI—POLYTRICHUM.
6. FILICINEÆ.
 Aspidium.
7. LYCOPODINEÆ.
 Selaginella.
8. GYMNOSPERMS.
 Pinus sylvestris.
9. ANGIOSPERMS.

Alternation of generation, apospory, apogamy, parthenogenesis, etc.

PRACTICAL BOTANY.

Demonstrator—WILLIAM LAIRD.

This Class will meet daily from 8 to 9 a.m. The Students will be provided with material for making microscopic preparations of the various tissues of angiosperms and other types.

TEXT BOOKS: Prantl and Vines' "Botany"; Sachs' "Botany" (advanced students); Hooker's "British Flora"; Bower's "Practical Botany."

CLINICAL SURGERY.

The Surgeons of the Royal Infirmary.

Clinical Surgery is taught by means of Demonstrations, Lectures, and Hospital Practice. The Class is conducted both Summer and Winter, meeting at 9 a.m., from Monday to Friday inclusive.

SURGERY.

Professor—PETER PATERSON, M.B., F.R.F.P.S.G.

The Lectures will be illustrated by Pathological Specimens, Instruments, Splints, and other appliances.

The following is an outline of the Course for the Winter Session, 1910-1911:—

1. Inflammation and its results.
2. Burns and Frost-bite.
3. Wounds and their Complications. Shock. Hæmorrhage.
4. Anæsthetics and the mode of their administration.
5. Surgical diseases due to microbic infection or parasites.
6. Tumours.
7. Diseases and injuries of joints.
8. Injuries of the head, brain, face, and neck.
9. Surgical affections of the stomach and intestines, including hernia.
10. Diseases and injuries of the spine.
11. Diseases of the genito-urinary system.
12. Diseases of the female breast.
13. Surgical affections of the liver and gall bladder.

Class Fee, £2 2s.

OPERATIVE SURGERY.

Professor—PETER PATERSON, M.B., F.R.F.P.S.G.

This course is a thoroughly practical one, the Students being required to perform all the customary operations on the dead

subject. As the supply of anatomical material is abundant, they have unusual opportunities for obtaining experience in operating. The following is a summary of the operations performed :—

1. Ligation of arteries in their continuity.
2. Abdominal operations ; Gastrostomy ; Resection of bowel
Colotomy ; Gastro-enterostomy.
3. Tracheotomy ; Excision of tongue ; Excision of upper jaw ;
Excision of lower jaw.
4. Operations on the eyeball and eyelids.
5. Amputation of penis ; Castration ; Lithotomy.
6. Excision of joints.
7. Exposure of main nerves for purpose of stretching or section.
8. Tenotomy of chief tendons.
9. Amputations.
10. Trephining, including the mapping out of brain areas.

Class Fee, £2 2s.

MEDICINE.

Professor—T. K. MONRO, M.A., M.D., F.R.F.P.S.G.,
Physician and Clinical Lecturer, Glasgow Royal Infirmary.

Assistant—CAMPBELL S. MARSHALL, M.D. (Glasg.),
D.P.H. (Camb.).

The course of instruction extends to nearly one hundred meetings of the class, and includes an account of the common types of disease that come under the cognisance of the physician as distinguished from the surgeon. The teaching will be much more systematic than that which is available in the hospital wards, and, on account of the great extent of the subject, very little time will be devoted to those elementary methods of diagnosis which are invariably taught in connection with a clinical course, and which, moreover, can only be demonstrated and practised on the living subject. While the Professor's clinical course in the Royal Infirmary is entirely independent of the systematic course in the College, it will doubtless be found

that in various ways the one will advantageously supplement the other.

In the winter session of 1910-11 attention will first be given in some detail to diseases of the nervous system. Thereafter the diseases of the following organs and systems will receive consideration, namely, the circulatory organs, the blood and ductless glands, the respiratory organs, the alimentary system, and the kidneys. Finally, the principal general diseases, including general infections, will come up for discussion.

Several demonstrations will be given in the course of the Session with the College lantern.

The class work will include three written examinations, which will be held in December, February, and March.

Class Fee, £2 2s.

TEXT BOOKS: the Professor's "Manual of Medicine";
Osler's "Principles and Practice of Medicine."

LARGER TREATISES: Allbutt and Rolleston's "System of Medicine"; Osler and M'Crae's "System of Medicine."

ELEMENTARY EXPERIMENTAL PHYSICS.

Professor—JAMES MUIR, D.Sc., M.A., of the Glasgow and West of Scotland Technical College.

A Course of Elementary Physics will be conducted, by arrangement with the Governors of the Glasgow and West of Scotland Technical College, in the Andersonian Buildings, George Street, on Mondays, Tuesdays, and Thursdays, at 11.15 a.m.

The Course will consist of fifty Lectures on (1) the properties of matter, (2) sound, (3) heat, (4) light, (5) magnetism, (6) electricity.

The Lectures will be strictly Elementary and fully illustrated by Experiments, special reference being made to the requirements of Medical Students.

Class Fee, £2 2s.

CLINICAL MEDICINE.

The Physicians of the Royal Infirmary.

Clinical Medicine is taught by means of Demonstrations, Lectures, and Hospital Practice. The Class is conducted daily during both Summer and Winter Sessions at 9 a.m.

MATERIA MEDICA AND THERAPEUTICS.

Lecturer—JOHN P. DUNCAN, M.B., Ch.B., B.Sc., F.R.F.P.S.G.

Pharmacognosy.—The sources, characters, and collecting of medicines.

Pharmacy.—The preparation, quality, physical conditions, and preservation of medicines.

Pharmacology.—The action of medicines on healthy organisms.

Therapeutics.—The action of medicines in disease.

Prophylaxis.—The prevention of disease.

After an introductory discussion on the above departments of the subject, the different parts will be taken up as follows :

Weights, measures, symbols.

Prescriptions, Dosage.

Method of administration of medicines.

Combination of medicines, Incompatibilities, Cumulative Action, etc.

Classification of medicines in accordance with their chief pharmacological actions.

Medicines of the British Pharmacopœia.—Vegetable substances—Animal substances—Carbon compounds—Inorganic substances.

New and Non-official Remedies.

The lectures will be illustrated by printed notes and by *Materia Medica* specimens which students may examine during the intervals of their classes.

TEXT BOOKS: “*Materia Medica, Pharmacy, Pharmacology and Therapeutics*,” by W. Hale White; or “*Elements of Pharmacy, Materia Medica, and Therapeutics*,” by Sir William Whitla; “*British Pharmacopœia*.”

Class Fee, £2 2s.

PRACTICAL PHARMACY.

Students are admitted to the Laboratory of the Royal Infirmary, where they are taught Pharmacy and the Compounding of Medicines.
Fee, for three months, £1 11s. 6d.

THE "NOTMAN" CHAIR OF PHYSIOLOGY.

Endowed by Mrs. Notman in memory of her Husband, the late Thomas Finlayson Notman.

Professor—DONALD DUFF, F.R.C.S. (Ed.), F.R.F.P.S.G.

Assistant—

The subjects embraced in this Course of Lectures are arranged in three divisions:—

DIVISION I.—Consideration of the physical and chemical phenomena exhibited by living tissues.

DIVISION II.—General Physiology, or the physiological processes occurring in the Tissues—(a) Histology of the Tissues; (b) Physical, chemical, and vital processes occurring in the Tissues.

DIVISION III.—Special Physiology, or the Physiology of Organs—(a) Nutrition; (b) Innervation; (c) Reproduction.

TEXT BOOK: Halliburton's "Handbook of Physiology."

Class Fee, £2 2s.

PRACTICAL PHYSIOLOGY.

This Class is conducted during the Summer Session. In it the student is taught—

1. The use of the Microscope, and the methods employed to prepare animal tissues for microscopical examination. He also prepares and examines microscopically the principal tissues and organs of the body; and for this purpose he is provided with microscope and all necessary reagents.
2. The method of analysing the principal animal fluids—special attention being devoted to those of which a knowledge is essential to the Hospital Student.
3. The mode of employing instruments for the investigation of physiological phenomena.

Class Fee, £2 2s.

PATHOLOGY.

Professor—JOHN H. TEACHER, M.A., M.D., F.R.F.P.S.G..

Pathologist to the Royal Infirmary.

Assistant—ALEX. M. KENNEDY, M.B., Ch.B.

The Class of Pathology comprises a combined Course of Systematic Lectures and of Praetical Laboratory Work. The Systematic Lectures are delivered during the Winter Session, and the Practical Class meets in Summer. The Student cannot enter for the two courses separately unless he has attended a previous Course in another school, but he may begin his pathological studies with either class.

The subject-matter of the Lectures is discussed under the following headings, viz. :

1. Derangements of the circulation of the blood, and morbid states resulting therefrom.
2. The pathology of inflammation.
3. The causes and varieties of infiltrations and degenerations.
4. The process of tumour-formation, with an outline of the classification of morbid growths.
5. The pathology of parasitic diseases, including a general discussion of the influence of pathogenic micro-organisms in the production of disease, and of the more common diseases caused by bacteria; and of the pathology of pyrexia or fever.
6. Special pathology of individual organs and tissues. This part of the course is varied from session to session, according to the time at the disposal of the Professor.

During the Winter Session, also, regular Class Demonstrations are given on the specimens of disease obtained in the *post-mortem* room. The Students in turn take part in the performance of the *post-mortem* examinations.

In the Summer Session instruction in Practical Pathology will be given in the *post-mortem* room and in the laboratory, the Students as far as possible being allowed to do everything for themselves. The class meets at twelve o'clock noon. The members of the Class will engage in the following Pathological work, viz. :

1. The performance of *post-mortem* examinations, and the study of the naked-eye appearances of diseased organs.
2. The selection and hardening of morbid tissues for the microscope.
3. Section-cutting, and the staining and mounting of microscopic sections.
4. Examination of sections with the microscope, and the collection of a series of pathological microscopic specimens.

Tissues, reagents, and microscopes are supplied for the use of

the Students, who, however, must provide themselves with slides and cover-glasses, dissecting forceps, and a soft napkin for cleaning the slides.

Written and Practical Class Examinations are held during the Session.

TEXT BOOKS: "Manual of Pathology," by Joseph Coats; "Textbook of Pathology," by Hektoen and Riesman; "Textbook of Pathology," by Stengel; "Manual of Bacteriology," by Muir and Ritchie.

Class Fee, £4 4s.

SURGICAL DISEASES OF CHILDREN.

Lecturer—JAMES A. ADAMS, M.D., F.R.F.P.S.G.,

Surgeon to the Glasgow Royal Infirmary.

The Course will be delivered during the Summer Session at an hour suitable to the Students, and will include Clinical Demonstrations and Instruction in the Wards of the Hospital.

SYNOPSIS OF LECTURES—

1. The management of infants and children during illness.
2. Hæmorrhagic Diathesis; Tuberculosis; Struma; Rachitis.
3. Congenital Malformations.—Hare-lip; Cleft palate; Spina bifida and Encephalocele; Talipes; Wry neck; Imperforate anus and rectum; Malformations of foot and hand.
4. Syphilis.
5. Fractures and Dislocations.
6. Affections of the Joints.
7. Diseases of the Periosteum and Bone.
8. Glandular Disease.—Cervical; Axillary; Femoral. Hodgkin's Disease.
9. Tumours.—Innocent; Malignant; Congenital.
10. Diseases of Spinal Column.—Caries; angular and lateral curvature.
11. Hernia.
12. Burns.—Scalds; subsequent deformities.
13. Genito-Urinary Affections.—Extroversion of bladder; Hypospadias; Phimosis; Paraphimosis; Masturbation; Hermaphroditism; Calculus; Lithotomy; Lithotripsy; Incontinence of urine.
14. Abdominal Diseases.—Peritonitis; Obstruction; Tabes; Tumours; Diseases of the rectum and anus.

15. Aural Disease.—Its influence upon intra-cranial abscess.
 16. Foreign Bodies in Eye, Ear, Nose, etc.
 17. Operations. — Osteotomy ; Tracheotomy ; Plastic operations ; Orthopædics, etc.
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FORENSIC MEDICINE.

Lecturer—DAVID M'KAIL, M.D. (Glasg.), D.P.H. (Camb.),
F.R.F.P.S.G.

This Class will meet daily at 12 noon during the Summer Session.

The Lectures on Forensic Medicine will, as far as possible, elucidate the application of every branch of Medical Science to the purposes of the law.

In the department of Public Health, special attention will be given to the subjects of Air, Ventilation and Heating, Water, Sanitary Law, Disposal of Sewage and Refuse, Disinfection, and Sanitation in general.

During the Session the Lecturer will conduct visits to the most important public institutions and works in the district dealing with Disinfection, Disposal of Sewage and Refuse, Ventilation, etc.

Demonstrations will be given frequently during the Session, illustrating, as far as possible, the whole range of Forensic Medicine and Public Health.

Students are recommended to take this Class in their fourth or fifth Summer Session.

OPHTHALMOLOGY.

WINTER SESSION.

Professor—A. MAITLAND RAMSAY, M.D., F.R.F.P.S.G.,
Ophthalmic Surgeon to the Royal Infirmary.

1. The relation of Ophthalmology to General Medicine and Surgery.
2. Optical principles ; the eye considered as an optical instrument ; numbering and nomenclature of trial lenses ; errors of refraction and their estimation.
3. The use of the ophthalmoscope.
4. Diseases of the eyelids and of the lachrymal apparatus.

5. The tissues of the eye in health and in disease, viz.:—Conjunctiva, cornea, sclerotic, iris, ciliary body, vitreous, choroid, retina and optic nerve.
6. Glaucoma.
7. Cataract: congenital, senile and traumatic.
8. Injuries of the globe. Sympathetic ophthalmia.
9. Affections of the ocular muscles.
10. Diseases of the orbit.
11. Amblyopia and Amaurosis due to central and other causes.
12. Operations.

At the Ophthalmic Institution, 126 West Regent Street, Lectures on Mondays and Thursdays at 4 p.m. Clinique on Tuesdays and Fridays from 2 to 3 p.m. Operations on Wednesdays at 2 p.m.

TEXT BOOKS: Swanzy's "Handbook of the Diseases of the Eye, and their Treatment,"—Lewis, London. "Pharmacopœia of the Glasgow Ophthalmic Institution," Ramsay—MacLehose, Glasgow.

Fee, £1 1s.

GYNÆCOLOGY.

Lecturer—G. BALFOUR MARSHALL, M.D., F.R.F.P.S.G.,
Gynæcologist to the Royal Infirmary.

This Course will consist of Systematic Lectures in the Royal Infirmary. The Lectures will include—

1. The Regional Anatomy of the Pelvis and its contained Organs.
2. The Modes of Examination.
3. The General Principles of Diagnosis.
4. The Structural Anatomy and Physiology of the Pelvic Organs.
5. Their Malformations.
6. The Pathology of these Organs individually, with Diagnosis and Therapeutics.
7. The Pathology of other Organs in relation to those of the Pelvis.
8. Neuroses in the Female.
9. Gynæcological Operations.

Class Fee, £2 2s.

Clinical instruction is given at the Dispensary by Dr. W. D. MACFARLANE, on Tuesdays and Thursdays at 10 a.m.

DISEASES OF THE THROAT AND NOSE.

Lecturer—ROBERT FULLERTON, M.D.,

*Surgeon for Diseases of Throat and Nose to the Out-Door Department
of the Royal Infirmary.*

A Course of twenty-four Lectures and Demonstrations will be given on Tuesdays and Fridays during the Winter Session at 12 noon in the Dispensary, commencing on the first Tuesday of November.

The subject will be taken up as indicated below.

Introduction.

The Use of the Laryngoscope and General Appearance of the Parts seen.

The Relation of Laryngology to General Medicine and Surgery.

The Anatomy and Physiology of the Nasal Fossæ, Pharynx, and Larynx.

Mucous Membranes, and Inflammations of Mucous Membranes.

The various diseases of the regions dealt with will be fully entered into as cases arise.

The instruction will be as practical in character as possible, and special attention given to practice in the use of the laryngoscope and to the diagnosis of the different pathological conditions met with.

MIDWIFERY.

Professor—ROBERT JARDINE, M.D., F.R.F.P.S.G., F.R.S.E.

Assistant—ALEX. H. EDWARDS, M.B., F.R.C.S.(Ed.).

*The Class will meet at 11 a.m. during the Fourth Summer Session of the
Student's Course.*

In addition to the Systematic Lectures, Clinical Demonstrations will be given each week in the Maternity Hospital.

The Bony Pelvis, its diameters, planes, axis, etc.

The Organs of Generation, external and internal.

Menstruation, Ovulation, etc.

Structure and arrangement of the Decidua. Structure and development of the Placenta and membranes.

Nourishment of the Ovum.

The Fœtal circulation.

Size of the Ovum and Fœtus in the different months.

Pregnancy ; its symptoms and signs.

Pseudocyesis.

Duration of Pregnancy.

Complications of Pregnancy.

Abortion.

Fleshy and Hydatiform Moles.

Ectopic Pregnancy.

Phenomena of Parturition.

Labour and its mechanism. The Fœtal Skull.

Management of an ordinary Labour.

The Puerperium. Care of mother and child.

Laborious Labours. Delay in the various stages of Labour from faults on the part of the powers, the passages, including deformed Pelvis, and the passenger.

Præternatural Labours. Complex or Complicated Labours.

Missed Labour. Labour in a double Uterus.

Complications of the Puerperium.

Obstetric operations.

The Forceps, Version, Induction of Labour. Symphysiotomy, Caesarean section, operations destructive to the child.

Accidents to the child during delivery. Abnormalities and diseases of the new-born child.

Infant feeding.

Class Fee, £2 2s.

FEVERS.

Instruction in Fevers will be given by Dr. JOHNSTON, at Belvidere Fever Hospital, and Dr. BROWNLEE, at Ruchill Fever Hospital, under the sanction of the Lord Provost and Magistrates.

Intending Students should apply to Dr. JOHNSTON or Dr. BROWNLEE for information regarding their respective Courses ; or to the Secretary of the Faculty of Medicine.

Fee, £1 1s.

DERMATOLOGY.

Lecturer—ALEXANDER MORTON, M.A., M.D.,
Physician for Diseases of the Skin to the Royal Infirmary.

Introduction. History of Dermatology. Anatomy of the Skin. Symptomatology. Etiology. Pathology. Diagnosis. Treatment (Local and Constitutional). Prognosis. Classification. Special Diseases—their Description and Treatment. Syphilis:—History and Definitions. Symptoms. Cutaneous Manifestations. Treatment.

OTOLOGY.

Lecturer—JAMES KERR LOVE, M.D.,
Aural Surgeon to the Royal Infirmary.

A Course of twelve Lectures and Demonstrations will be given during the Summer Session on Tuesdays and Fridays at 3 p.m.

The Lectures will be illustrated as far as possible by cases in the Glasgow Royal Infirmary, and amongst the pupils at the Institution for the Deaf and Dumb, Langside.

TEXT BOOKS: Politzer's "Diseases of the Ear"; Pritchard on the Ear; "Deaf Mutism," Love and Addison; Marmaduke Shield's "Diseases of the Ear"; Kerr Love, "Diseases of the Ear," 1904.

BACTERIOLOGY.

Lecturer—DAVID M'CRORIE, L.R.C.P. & S., Edin., etc.

Assistant—J. ARCH. CAMPBELL, L.R.C.P. & S., Edin.

The Class, which is chiefly practical, will be conducted during the Summer Session daily at an hour to suit the convenience of the Students.

Students will be taught—

1. The Methods of Investigation, Cultivation, and Transmission.
2. How to obtain pure Cultures of (*a*) Aerobic, and (*b*) Anaerobic Germs.
3. How to recognise, etc., the Pathogenic, and the most common Non-pathogenic Bacteria.

4. How to examine bacteriologically—Water, Milk, Blood, Earth, Air, etc.

Class Fee, £2 2s.

Winter Courses of Practical Bacteriology of three months' duration may be arranged for.

THE "MACKINTOSH" LECTURESHIP

(Endowed by Donald Mackintosh, M.D., in honour of his brother, Alexander Mackintosh, M.D., late Physician Superintendent, Glasgow Royal Asylum, Gartnavel)

ON

PSYCHOLOGICAL MEDICINE.

Lecturer—HAMILTON C. MARR, M.D., F.R.F.P.S.G.,
Medical Superintendent of Woodilee District Asylum, Lenzie.

The aim of this Course will be to meet in a practical way the requirements of general practice. These Lectures qualify for Degrees in Medicine of the Royal University of Ireland, the Universities of Glasgow and Oxford, etc.

The regular Course will consist of 8 Systematic and 12 Clinical Lectures. The Systematic Lectures to be delivered at the College will comprise—

- (a) Introductory—The limits of the Insanities of Mind; anatomical and physiological considerations. The diagnosis of mental disorders. The etiology of the Insanities.
- (b) General Symptomatology—
 1. Disturbed mentalisation, illusions, hallucinations, delusions, imperative ideas, obsessions and impulses (episodic syndromes), loss, diminution or alteration of the power of connected thought, loss of "attention," diminution of purposeful will power, change in sexual desire, alteration in the æsthetic and religious elements in mind, unwarranted fear.
 2. Sensory disturbances.
 3. Disturbances of motor functions.
 4. Vaso-motor and trophic lesions.
- (c) The classification of the Insanities: 1. Symptomatological; 2. Etiological; 3. Insanities of the mentally degenerate; 4. Idiocy, imbecility.
- (d) General treatment, general pathology of the Insanities. Pathology of the more important clinical types. Medico-legal relations—testamentary capacity, criminal responsibility.

The introductory Lecture will be delivered at the College in April, when the arrangements for the Course will be explained, and the days and hours of the Lectures and Cliniques fixed to suit the convenience of Students.

Fee for the Course, £1 1s.

PUBLIC HEALTH DEPARTMENT.

The Governors, in view of the increasing importance of this subject, deemed it advisable, at the inception of the College, to disassociate the teaching of Hygiene from the Chair of Forensic Medicine, and to establish a new department of education in Public Health.

In addition, the Governors fitted up a Public Health Laboratory where students may follow a complete course of instruction in practical work, and thereby conform to the new regulations of the Medical Council, and the requirements of the Examining Boards.

The new regulations of the Medical Council in regard to Diplomas and Degrees in Public Health came into force on the 1st January, 1891, and in order that students may familiarise themselves with them they are here summarily put.

I. That no diplomas would be recognised by the Council unless they have been granted under such conditions of education and examination as to ensure the possession of a distinctively high proficiency, scientific and practical, in all the branches of study which concern the public health.

II. That the examination shall be conducted by examiners specially qualified, and shall comprise laboratory work, as well as written and oral examination.

III. That one year shall have elapsed between the obtaining of a registrable medical qualification and the qualification in public health.

IV. That each candidate shall be required to produce evidence of having worked in a Public Health Laboratory, approved by the body granting the qualification, for a period of not less than *six* months.

V. That every candidate shall produce evidence of having for at least three months practically studied the duties of out-door sanitary work under the medical officer of health of a County or large Urban district

These rules, as to study, do not apply, however, to medical men whose names were on the medical register on or before the 1st day of January, 1890, or to registered practitioners who have, for a period of three years prior to the enforcement of the foregoing regulations, held the position of medical officer of health to any County, or to any Urban district of more than 20,000 inhabitants, or to any entire Rural sanitary district.

But while it is not necessary, therefore, for medical men so exempted to attend practical laboratory instruction, it has been found expedient for them to do so, and in the regulations issued by the bodies qualified to grant such diplomas intending candidates are so advised.

Lecturer—DAVID M'KAIL, M.D. (Glasg.), D.P.H. (Camb.),
F.R.F.P.S.G.

SYSTEMATIC COURSE.

This will include Lecture Demonstrations on the following :—

Air.—Composition ; properties ; impurities ; methods of analysis ; ventilation ; heating and lighting.

Water.—Sources of supply ; collection ; storage ; distribution ; impurities ; filtration ; purification ; methods of analysis.

Soil.—Formation ; composition and physical characters of different soils ; moisture and gases of soil ; permeability ; organic constituents ; earth temperatures.

Meteorology.—Climate ; diseases in relation to their geographical distribution ; atmospheric humidity ; winds ; barometric pressures ; ocean currents ; meteorological instruments : barometers, thermometers, psychrometers, sunshine recorders, rain gauges.

Food.—Sources of food supply ; constituents ; nutritive values ; diets ; methods of preparation ; effect of cooking ; methods of analysis ; adulterations ; food as related to disease.

Parasites.—Insects ; arachnids ; nematodes ; cestodes ; trematodes.

Bacteriology.—General principles ; modes of investigation ; immunity ; serum therapy.

Pathology.—The pathology of diseases of animals communicable to man.

Clothing.—Functions of clothing ; clothing materials—their structure and physical properties ; dress considered from the hygienic and artistic points of view.

Personal Hygiene.—Habits ; exercise ; recreation ; occupations and their related diseases.

Habitations.—Sites ; foundations ; construction of walls and roof ; damp-proof courses ; class rooms ; general hospitals ; hospitals for infectious disease ; drainage ; testing of drains, traps, closets, soil pipes, etc.

Sewage.—Constituents (liquid, solid, and gaseous) ; conveyance ; disposal.

Vital Statistics.—Population ; birth rate ; marriage rate ; death rate ; morbidity rate ; density of population ; age and sex distribution ; comparative mortality tables ; life tables ; incidence of disease ; statistical methods ; fallacies ; enumeration.

Sanitary Law.

Sanitary Engineering.

PRACTICAL LABORATORY COURSE.

Under the personal supervision of Dr. M'KAIL.

The Laboratory instruction is recognised for the Diplomas in Public Health of the Triple Scotch Colleges, of the English Colleges, and of the Universities of Cambridge and Oxford, under the new regulations.

The Laboratory is open at hours arranged to suit Classes for practical instruction in the methods of analysis of air, water, soils, foods, and the detection of adulterations ; and instruction in practical meteorology, sanitary appliances, and physics, in relation to public health.

Preliminary Methods.—Principles of volumetric and gravimetric analysis ; titration ; weighing ; specific gravities ; instruction in use of chemical and physical apparatus employed. (Each student must show proficiency in this section before proceeding further.)

Air.—Examination of—chemical and physical ; estimation of CO_2 and H_2O ; gaseous and solid impurities and their detection ; bacteriological examination.

Water.—Physical examination ; qualitative and quantitative analysis ; properties of potable waters ; gases ; total solids ; organic matter—vegetable and animal ; chlorides ; sulphates ; phosphates ; nitrates ; nitrites ; ammonia ; bacteriological examination.

Food.—Methods of analysis ; microscopic examination ; moisture ; albuminoids ; fats ; carbohydrates ; salts ; ash ; alcohol ; acids ; adulterants—their detection and estimation ; food preservatives ; condensed foods ; meat extracts.

Disinfectants.—Composition ; value ; methods of examination.

The Laboratory is furnished with all the necessary chemical apparatus, etc., required for analysis, and each student is furnished with a set of apparatus for personally doing the work.

There is a full and up-to-date collection of all appliances connected with practical public health work ; while the whole Laboratory has been recently thoroughly equipped.

The facilities for studying the practical application of public health methods in Glasgow and vicinity are unsurpassed, and visits will be paid during the course to places of interest in this connection.

FEE—

WINTER SESSION—Lectures, and Six Months'

Laboratory Instruction, - - - - £12 12 0

The Regulations regarding the Degrees and Diplomas in Public Health may be obtained on application to the Secretaries and Registrars of the various Corporations and Universities. The attention of intending students is directed to the new regulations for the Diploma, by which candidates under certain conditions only require *three* months' out-door work under a Medical Officer of Health.

TABLE OF MEDICAL COURSES.

	M	Tu	W	Th	F	S	HOURS.
First Year—							
<i>Winter.</i>							
CHEMISTRY, - - - - -	—	—	—	—	—		9
ZOOLOGY, - - - - -	—	—	—	—	—		1-30
PRACTICAL ZOOLOGY, - - - - -	—	—	—	—	—		2-30 to 4.
PHYSICS, - - - - -	—	—	—	—	—		11.15
ANATOMY (Junior), - - - - -	—	—	—	—	—		9
<i>Summer.</i>							
PRACTICAL CHEMISTRY, - - - - -	—	—	—	—	—		10
BOTANY, - - - - -	—	—	—	—	—		9
PRACTICAL BOTANY, - - - - -	—	—	—	—	—		8
ANATOMY (Dissections), - - - - -	—	—	—	—	—	—	8 to 5
ANATOMY (Demonstrations), - - - - -	—	—	—	—	—		11 and
Second Year—							
<i>Winter.</i>							
ANATOMY (Senior), - - - - -	—	—	—	—	—		11
ANATOMY (Dissections), - - - - -	—	—	—	—	—		9 to 5
PHYSIOLOGY (Lectures), - - - - -	—	—	—	—	—		12
<i>Summer.</i>							
ANATOMY (Dissections), - - - - -	—	—	—	—	—	—	8 to 5
ANATOMICAL DEMONSTRATIONS, - - - - -	—	—	—	—	—		11 and
PHYSIOLOGY (Practical), - - - - -	—	—	—	—	—		12
Third Year—							
<i>Winter.</i>							
PATHOLOGY, - - - - -	—	—	—	—	—		3
MATERIA MEDICA, - - - - -	—	—	—	—	—		{ As may be
CLINICAL SURGERY, - - - - -	—	—	—	—	—		arranged.
SYSTEMATIC SURGERY, - - - - -	—	—	—	—	—		9
DISPENSARY, - - - - -	—	—	—	—	—		12
PRACTICAL PHARMACY, - - - - -	—	—	—	—	—	—	2
<i>Summer.</i>							
PRACTICAL PATHOLOGY, - - - - -	—	—	—	—	—		1 to 3
CLINICAL SURGERY, - - - - -	—	—	—	—	—		9
DISPENSARY, - - - - -	—	—	—	—	—	—	2

The above Hours are subject to re-arrangement.

	M	Tu	W	Th	F	S	HOURS.
Fourth Year—							
<i>Winter.</i>							
CLINICAL MEDICINE, - - -	—	—	—	—	—		9
PRACTICE OF MEDICINE, - - -	—	—	—	—	—		12
GYNÆCOLOGY, - - -	—	—	—	—	—		11
APSPENSARY, - - -	—	—	—	—	—	—	2
<i>Summer.</i>							
CLINICAL MEDICINE, - - -	—	—	—	—	—		9
OPERATIVE SURGERY, - - -	—	—	—	—	—		11
MIDWIFERY, - - -	—	—	—	—	—		11
PRACTICAL MIDWIFERY, - - -	—	—	—	—	—		9
BACTERIOLOGY, - - -	—	—	—	—	—		2
APSPENSARY, - - -	—	—	—	—	—		
Fifth Year—							
<i>Winter.</i>							
CLINICAL MEDICINE, } On alternate							9
CLINICAL SURGERY, } days.							4
OPHTHALMOLOGY, - - -	—			—			12
THROAT AND NOSE, - - -		—			—		
FEVERS (at Ruchill and Belvidere),							
VACCINATION, - - -							
URGICAL DISEASES OF CHILDREN, -		—		—			11.30
<i>Summer.</i>							
CLINICAL MEDICINE, } On alternate							9
CLINICAL SURGERY, } days.							12
FORENSIC MEDICINE, - - -	—	—	—	—	—		2
PSYCHOLOGICAL MEDICINE, - - -				—			12
DERMATOLOGY, - - -		—			—		3
TOLOGY, - - -		—					

The above Hours are subject to re-arrangement.

TABLE OF MEDICAL FEES.

COLLEGE FEES—

For any Curriculum Class taken singly (except Anatomy, £4 4s. ; Pathology, £4 4s. ; Zoology and Botany, joint fee, £3 3s.),	-	-	-	-	-	£2	2	0
Second Session and Perpetual (except Anatomy),	-	-	-	-	-	1	1	0
Anatomy (Winter Session)—Lectures and Practical,	-	-	-	-	-	4	4	0
„ (Summer Session)— { Demonstrations }	-	-	-	-	-	2	2	0
„ „ { and Practical, }	-	-	-	-	-			
„ „ Demonstrations only,	-	-	-	-	-	1	1	0
Lectures on Ophthalmology, Insanity, Throat and Nose, Otology, and Fevers,	-	-	-	-	-	1	1	0
Bacteriology,	-	-	-	-	-	2	2	0
Gynæcology,	-	-	-	-	-	2	2	0
Elementary Physics,	-	-	-	-	-	2	4	6

PUBLIC HEALTH—

Winter—Lectures and Six Months' Laboratory Instruction,	-	-	-	-	-	12	12	0
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HOSPITAL FEES—

Admitting to all Departments of the Hospital, Hospital Practice, and Clinical Lectures,	-	-	-	-	-	21	0	0
Payable First Year,	-	-	-	-	-	10	10	0
Second and Perpetual,	-	-	-	-	-	10	10	0
For Six Months,	-	-	-	-	-	6	6	0
Three Months,	-	-	-	-	-	4	4	0
To perpetual Students of other Hospitals in the United Kingdom where the perpetual fee is equal to that of the Royal Infirmary, admitting to One Course of either Medical or Surgical Clinical Instruction, for Six Months,	-	-	-	-	-	3	3	0
Three Months,-	-	-	-	-	-	1	11	6
Practical Midwifery at the Maternity Hospital, Portland Street, for Six Months,	-	-	-	-	-	2	2	0
Lock Hospital, Rottenrow, for Three Months,	-	-	-	-	-	2	2	0
Vaccination,	-	-	-	-	-	1	1	0
Practical Pharmacy,	-	-	-	-	-	1	11	6

Full information respecting Fees may be obtained from the Secretary of the Faculty of Medicine.

INFORMATION FOR STUDENTS ABOUT TO COMMENCE MEDICAL STUDY.

A.—All Students before commencing Medical Study are required to pass a Preliminary Examination in General Education, approved by the General Medical Council.

List of Examining Bodies whose Examinations in General Education are recognised by the Medical Council as Qualifying for the Registration of Medical or Dental Students.

I.—UNIVERSITY EXAMINATIONS HELD IN THE UNITED KINGDOM.

A.

Final Examinations for a Degree in Arts or Science of any University in the United Kingdom.

B

UNIVERSITIES OF OXFORD AND CAMBRIDGE—

Junior Local Examinations. (Certificates to be endorsed as fulfilling the Council's requirements.)

Senior Local Examinations. (Certificates to be endorsed as fulfilling the Council's requirements.)

OXFORD—

Responsions. (Certificate to be supplemented by others showing that the required mathematical subjects have been passed.)

Moderations. (Certificates to include the required subjects.)

CAMBRIDGE—

Higher Local, Previous, or General Examination. (Certificates to include the required subjects.)

OXFORD AND CAMBRIDGE SCHOOLS' EXAMINATION BOARD—

Lower Certificate Examinations. (The required subjects to be passed at one time.)

Higher Certificate Examinations. (Certificates to include the required subjects.)

UNIVERSITY OF DURHAM—

Examination for Certificate of Proficiency. (The required subjects to be passed at one time.)

Senior Local Examinations. (Certificate to include the required subjects.)

UNIVERSITIES OF LONDON, BIRMINGHAM, WALES, LIVERPOOL, LEEDS—

Matriculation Examination. (Certificates to include the required subjects.)

VICTORIA UNIVERSITY, MANCHESTER—

Preliminary Examination. (Certificates to include the required subjects.)

UNIVERSITIES OF SCOTLAND—

Preliminary Examination of the Joint Board of Examiners of the Scottish Universities for Graduation in Medicine and Surgery. (The required subjects to be passed at one, or not more than two Examinations.)

Preliminary Examination of the Joint Board of Examiners of the Scottish Universities for Graduation in Arts or Science. (Certificates to include the required subjects.)

UNIVERSITY OF DUBLIN—

Principal Public Entrance Examinations. (The required subjects to be passed at one time.)

Examinations for the First, Second, Third, or Fourth Year in Arts. (Certificate to be signed in the approved form by the Medical Registrar of the University.)

ROYAL UNIVERSITY OF IRELAND—

Matriculation Examination. (Certificate to include the required subjects.)

II.—GOVERNMENT EXAMINATIONS HELD IN THE UNITED KINGDOM.

SCOTTISH EDUCATION DEPARTMENT—

Leaving Certificate Examinations: passes in Lower Grade. (The required subjects to be passed at one, or not more than two Examinations.)

Leaving Certificate Examinations: passes in Higher Grade or Honours. (To include the required subjects.)

INTERMEDIATE EDUCATION BOARD OF IRELAND—

Middle Grade Examination. (The required subjects to be passed at one time.)

Senior Grade Examination. (Certificates to include the required subjects.)

CENTRAL WELSH BOARD—

Senior Certificate Examinations. (Certificates to include the required subjects.)

III.—EXAMINATIONS BY CHARTERED BODIES HELD IN THE UNITED KINGDOM.

COLLEGE OF PRECEPTORS—

Examinations for First-class Certificate. (The required subjects to be passed at one, or not more than two Examinations.)

Preliminary Examination for Medical Students. (The required subjects to be passed at one time.)

EDUCATIONAL INSTITUTE OF SCOTLAND—

Preliminary Medical Examination. (The required subjects to be passed at one time.)

ROYAL COLLEGES OF PHYSICIANS AND SURGEONS IN IRELAND—

Preliminary Examination. (The required subjects to be passed at one time.)

IV.—EXAMINATIONS HELD OUT OF THE UNITED KINGDOM.

These include the Preliminary or Matriculation Examinations of most Colonial Universities and Colleges, of which information in detail may be had on application to the Dean.

Subject to the conditions indicated in the foregoing List, the Preliminary Examinations recognised by the General Medical Council are required to include the following :

(a) ENGLISH (Grammar ; Paraphrasing ; Composition ; questions on English History and Geography).

(b) LATIN (Grammar ; Translation into English from unprescribed Latin books ; Translation into Latin of a continuous English passage, and of short idiomatic English sentences).*

(c) MATHEMATICS (Arithmetic ; Algebra, including easy quadratic equations ; Geometry, including the subject-matter of *Euclid*, books i., ii., iii., and simple deductions).

(d) One of the following subjects :

(1) GREEK (Grammar ; Translation into English from unprescribed Greek books ; Translation into Greek of short idiomatic English sentences) ; *or*

(2) A MODERN LANGUAGE (Grammar ; Translation into English from unprescribed books ; Translation of a continuous English passage, and of short idiomatic English sentences).

Candidates who desire to pass the Examination of the Educational Institute must obtain Forms of Application from, and pay their Fees to S. M. MURRAY, Esq., Educational Institute Office, 34 North Bridge Street, Edinburgh, who will supply Calendar containing Examination Papers, if desired (price by post 1s.), and give any further information.

B.—Having passed the whole of the Preliminary Examination, the Student next requires to be registered as a Medical Student ; in order to do this, he must actually commence Medical Study by taking out Classes at a School of Medicine. The Dean of the Medical Faculty of St. Mungo's College supplies students with forms for Registration, and attests their commencement of Medical Study, when they take out Classes in the College. The Student then sends this form, along with his certificate of having passed the Preliminary examination, and evidence of his having attained the age of sixteen years, to the

* In the case of natives of India or other Oriental countries, whose vernacular is other than English, an examination in a Classical Oriental Language may be accepted as equivalent to an examination in Latin.

Registrar of the Medical Council, who in due course sends him a Certificate of Registration. There is no fee payable.

In *Scotland* the Registrar's address is James Robertson, Esq., 54 George Square, Edinburgh.

In *England* the Registrar's address is Henry E. Allen, Esq., LL.B., 299 Oxford Street, London, W.

C.—The Student now enters on Medical Study, and requires to take out certain courses of lectures and hospital practice, which extend over a period of *not less than five years* from the date of his Registration as a Medical Student. But Graduates in Arts and Science who shall have spent a year in the study of Physics, Chemistry, and Biology, and have passed an examination in these subjects for the Degree, shall be held to have completed the first year of Medical Study.

The following is a Statement of the entire Course of Study required:—

PHYSICS, - - - - -	3 months.
ELEMENTARY BIOLOGY, - - - - -	3 months.
CHEMISTRY, - - - - -	6 months.
PRACTICAL CHEMISTRY, - - - - -	3 months.

* * The Certificates in those subjects should show in what form the instruction has been given, whether by Lectures, Demonstrations, Practical Work, etc.

ANATOMY, - - - - -	1 Course	.....	6 months.
PRACTICAL ANATOMY (DISSECTIONS, which should comprise the whole human body), - - - - -			12 months.
MATERIA MEDICA, including THERAPEUTICS, - - - - -	1 Course	.....	3 months.
PHYSIOLOGY, - - - - -	1 Do.	.....	6 months.
PATHOLOGY, - - - - -	1 Do.	.....	3 months.
PRINCIPLES AND PRACTICE OF MEDICINE, - - - - -	1 Do.	.....	6 months.
PRINCIPLES AND PRACTICE OF SURGERY, - - - - -	1 Do.	.....	6 months.
MIDWIFERY AND DISEASES OF WOMEN AND OF NEW-BORN CHILDREN, - - - - -	1 Do.	.....	3 months.
FORENSIC MEDICINE AND HYGIENE, - - - - -	1 Do.	.....	3 months.

* * The above Courses must be attended at a recognised Medical School. In the Systematic Courses, Lectures need not be delivered oftener than thrice weekly, but the certified attendance must be on not less than three-fourths of the total number of Lectures delivered in a Course.

CLINICAL MEDICINE, - - - - -	Not less than 9 months.
CLINICAL SURGERY, - - - - -	Not less than 9 months.
FEVERS, - - - - -	1 Course of not less than 13 meetings.
INSANITY, - - - - -	1 Course of not less than 13 meetings.
DISEASES AND INJURIES OF THE EYE, - - - - -	1 Course of not less than 13 meetings.
DISPENSARY PRACTICE, - - - - -	Not less than 6 months.
HOSPITAL PRACTICE, - - - - -	Not less than 3 years.

* * * The above Courses of Clinical Medicine and Clinical Surgery shall be attended at a recognised Public General Hospital, containing on an average not less than eighty patients, available for Clinical Instruction, and possessing distinct staffs of Physicians and Surgeons. The entire certified period of Hospital attendance, with Clinical Instruction, must not be less than twenty-four months. Evidence must be produced that the Candidate has acted as Surgical Dresser and as Medical Clinical Clerk. The Dispensary Practice may be attended either at the Out-Patient Department of a General Hospital, or at a recognised Public Dispensary.

The following Practical Courses are also required :—

- (a) Three months' instruction in PRACTICAL PHARMACY, which shall include not less than twenty-five meetings, and which may be attended at a Medical School or Public Hospital, Laboratory or Dispensary, or under a Registered Pharmaceutical Chemist, or Registered Medical Practitioner who dispenses medicines to his patients.
- (b) PRACTICAL MIDWIFERY, attendance for three months on the in-door practice of a Lying-in Hospital, and personal attendance on six cases of Labour, or alternatively, attendance on twelve cases of Labour under the supervision of a Registered Medical Practitioner.


Students commencing Medical Study after 1st October, 1908, must have attended a Course of Lectures on Surgery and Midwifery and have held the offices of Clinical Medical Clerk and Surgical Dresser before receiving instruction in Practical Midwifery. In their case, attendance on twelve cases of Labour is required.

- (c) That the Candidate has been properly instructed in Vaccination by a Public Vaccinator, authorised by the proper Government authority to grant Certificates of proficiency in Vaccination.

Candidates for the English Conjoint Examinations must produce certificate of attendance on a course of Practical Physiology extending over a period of six months.

Students are recommended to pay particular attention to practical work in connection with all the departments of study, and to avail themselves of opportunities of acquiring practical acquaintance with special departments of Clinical Study, such as Diseases of the Ear, Throat, and Skin, Diseases of Women and Children, and Operative Surgery. The Examinations will be conducted so as to test practical knowledge.

D.—The order in which it is recommended that the several courses of Lectures and Hospital Practice should be taken out is shown in the table at pages 34 and 35. The fifth year of study is now compulsory on all Students registered on or after January 1st, 1892; it is intended to be devoted mainly to Clinical work, and the study of special subjects, such as Diseases of the Eye, Ear, and Throat, Fevers, Insanity, etc. By taking the classes in the order given in the table the Student will be able to accomplish this. The Secretary of the Medical Faculty will be glad to give Students advice as to their course.



SOME TIGHT
GUTTERS

TABLE(S)
RUN INTO
GUTTER